



# SAFETY DATA SHEET

SDS ID NO.: 0109MAR019  
Revision Date 10/07/2015

## 1. IDENTIFICATION

**Product Name:** Marathon Petroleum Petroleum Coke  
**Synonym:** Petroleum Coke; Green Coke  
**Product Code:** 0109MAR019  
**Chemical Family:** Carbon  
**Recommended Use:** Fuel.  
**Restrictions on Use:** All others.

**Manufacturer, Importer, or Responsible Party Name and Address:**  
**MARATHON PETROLEUM COMPANY LP**  
**539 South Main Street**  
**Findlay, OH 45840**

**SDS information:** 1-419-421-3070  
**Emergency Telephone:** 1-877-627-5463

## 2. HAZARD IDENTIFICATION

### Classification

#### **OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Combustible dust	OSHA defined hazard
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#### **Hazards Not Otherwise Classified (HNOC)**

Not applicable.

### Label elements

#### **EMERGENCY OVERVIEW**

#### **Warning**

May form combustible dust concentrations in air (during processing)

**Appearance** Black Porous Chunks or Powder

**Physical State** Solid

**Odor** Slight Hydrocarbon

#### **Precautionary Statements - Prevention**

Minimize dust generation and accumulation

Keep away from all ignition sources including heat, sparks and flame. No Smoking

Clean as needed to prevent hazardous accumulation or dispersion of fugitive dust

Bond and ground containers, equipment and/or conducting surfaces to minimize and dissipate electrostatic charge  
When necessary, employ explosive force dissipation design to vent away from other combustibles

**Precautionary Statements - Response**

Avoid contact with eyes and breathing of dust.

In case of fire: Use Use portable spray hose nozzles that are listed or approved for use on Class C fire for extinction for extinction

**Precautionary Statements - Storage**

Store in a cool and well-ventilated area

Wetting will suppress dust release

**Precautionary Statements - Disposal**

Dispose of contents/container at an approved waste disposal plant

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Composition varies depending on source of final product. Polycyclic aromatic hydrocarbons (3-7 ring), such as benzo(a)pyrene, are present in trace concentrations (<0.1%).

**Composition Information:**

Name	CAS Number	% Concentration
Petroleum Coke	64741-79-3	100
Sulfur Compounds	Mixture	1-6
Polycyclic Aromatic Hydrocarbons	Mixture	<0.1

All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

### 4. FIRST AID MEASURES

**First Aid Measures**

- General Advice:** In case of accident or if you feel unwell, seek medical advice immediately (show directions for use or safety data sheet if possible).
- Inhalation:** Remove to fresh air. If not breathing, institute rescue breathing. If breathing is difficult, ensure airway is clear, give oxygen and continue to monitor. If heart has stopped, immediately begin cardiopulmonary resuscitation (CPR). If symptoms or irritation occur, call a physician.
- Skin Contact:** Wash skin with plenty of soap and water. Get medical attention if irritation persists. Wash contaminated clothing before re-use.
- Eye Contact:** Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Gently remove contacts while flushing. Get medical attention if irritation persists.
- Ingestion:** Rinse mouth out with water. If symptoms develop, seek medical attention.

**Most important signs and symptoms, both short-term and delayed with overexposure**

**Adverse Effects:** Dust may be a mechanical irritant.

**Indication of any immediate medical attention and special treatment needed**

**Notes To Physician:** Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media**

Portable spray hose nozzles that are listed or approved for use on Class C fires shall be provided in areas that contain dust, to limit

the potential for generating unnecessary airborne dust during fire-fighting operations. Personnel shall be trained to use portable extinguishers in a manner that minimizes the generation of dust clouds during discharge. Firefighting should be attempted only by those who are adequately trained and equipped with proper protective equipment.

#### Unsuitable extinguishing media

Straight-stream nozzles shall not be used on fires in areas where dust clouds can be generated.

#### Specific hazards arising from the chemical

May form combustible dust concentrations in air. Fine dust dispersed in air, in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Non-sparking tools/equipment should be considered when a potentially combustible dust environment exists.

#### Hazardous combustion products

Smoke, carbon monoxide, and other products of incomplete combustion.

#### Explosion data

Sensitivity to Mechanical Impact No.

Sensitivity to Static Discharge Yes.

#### Special protective equipment and precautions for firefighters

Firefighters should wear full protective clothing and positive-pressure self-contained breathing apparatus (SCBA) with a full face-piece, as appropriate. Avoid generation and accumulation of dust when handling this material. Refer to NFPA 654 Standard for Prevention of Fire & Dust Explosions. Avoid using straight water streams. Water spray and foam (AFFF/ATC) must be applied carefully to avoid frothing and from as far a distance as possible. Keep surrounding area cool with water spray from a distance and prevent further ignition of combustible material. Avoid excessive water spray application. Keep run-off water out of sewers and water sources.

#### Additional firefighting tactics

Not applicable.

#### NFPA

Health 1

Flammability 1

Instability 0

Special Hazard -

## 6. ACCIDENTAL RELEASE MEASURES

#### Personal precautions:

Keep people away from and upwind of spill/leak. Dust deposits dispersed into the atmosphere in sufficient concentration may form an explosive mixture. Eliminate all ignition sources. Ensure adequate ventilation.

#### Protective equipment:

Use personal protection measures as recommended in Section 8.

#### Emergency procedures:

Advise authorities and National Response Center (800-424-8802) if the product has entered a water course or sewer. Notify local health and pollution control agencies, if appropriate.

#### Environmental precautions:

Avoid release to the environment.

#### Methods and materials for containment:

Prevent dust cloud. Cover powder spill with plastic sheet or tarp, or keep wetted to minimize dispersion of powder.

#### Methods and materials for cleaning up:

Sweep up and shovel into suitable containers for disposal. If disturbed, dust on surfaces can be dispersed and form explosive mixtures in the air, e.g. compressed air cleaning. Ensure all equipment is bonded and grounded. Use only non-sparking tools.

## 7. HANDLING AND STORAGE

#### Safe Handling Precautions:

To avoid the combustible dust hazard, minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations and cause an electrical spark. Provide adequate precautions, such as electrical grounding and bonding, or nonreactive atmospheres. Use non-sparking tools.

Avoid contact with eyes. Avoid breathing dust. Refer to applicable EPA, OSHA, NFPA and consistent state and local requirements.

**Storage Conditions:** When stored indoors keep in a cool, well-ventilated area. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. Petroleum Coke may be stored outdoors with proper provisions for containment. Wetting will suppress dust release.

**Incompatible Materials** Strong oxidizing agents.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	ACGIH TLV	OSHA PELs:	OSHA - Vacated PELs	NIOSH IDLH
Petroleum Coke 64741-79-3	-	-	-	-
Sulfur Compounds Mixture	-	-	-	-
Polycyclic Aromatic Hydrocarbons Mixture	-	-	-	-

**Notes:** The manufacturer has voluntarily elected to provide exposure limits contained in OSHA's 1989 air contaminants standard in its SDSs, even though certain of those exposure limits were vacated in 1992.

**Engineering measures:** Local or general exhaust required in an enclosed area or when there is inadequate ventilation. Use mechanical ventilation equipment that is explosion-proof.

### Personal protective equipment

**Eye protection:** Dust goggles if use produces excessive dust/fume concentrations.

**Skin and body protection:** Protective disposable gloves to prevent skin exposure.

**Respiratory protection:** Use a NIOSH approved air-purifying respirator equipped with P100 particulate filter or a supplied air respirator when there is the potential for airborne exposures to exceed permissible exposure limits or if excessive dust or fumes are generated.

**Hygiene measures:** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Physical State</b>	Solid
<b>Appearance</b>	Black Porous Chunks or Powder
<b>Color</b>	Black
<b>Odor</b>	Slight Hydrocarbon
<b>Odor Threshold</b>	No data available.

<u>Property</u>	<u>Values (Method)</u>
<b>Melting Point / Freezing Point</b>	No data available.
<b>Initial Boiling Point / Boiling Range</b>	No data available.
<b>Flash Point</b>	No data available.
<b>Evaporation Rate</b>	No data available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Flammability Limit in Air (%):</b>	
<b>Upper Flammability Limit:</b>	No data available.
<b>Lower Flammability Limit:</b>	No data available.
<b>Explosion limits:</b>	No data available.
<b>Vapor Pressure</b>	No data available.
<b>Vapor Density</b>	No data available.
<b>Specific Gravity / Relative Density</b>	0.8-1.0

<b>Water Solubility</b>	Negligible
<b>Solubility in other solvents</b>	No data available.
<b>Partition Coefficient</b>	No data available.
<b>Decomposition temperature</b>	No data available.
<b>pH:</b>	Not applicable.
<b>Autoignition Temperature</b>	No data available.
<b>Kinematic Viscosity</b>	No data available.
<b>Dynamic Viscosity</b>	No data available.
<b>Explosive Properties</b>	No data available.
<b>VOC Content (%)</b>	No data available.
<b>Density</b>	No data available.
<b>Bulk Density</b>	Not applicable.
<b>Kst</b>	47 bar.m/s (explosion pressure build-up in meters/second) NFPA 68 2007 Table F.1b

## 10. STABILITY AND REACTIVITY

<b><u>Reactivity</u></b>	The product is non-reactive under normal conditions.
<b><u>Chemical stability</u></b>	The material is stable at 70°F (21°C ), 760 mmHg pressure.
<b><u>Possibility of hazardous reactions</u></b>	None under normal processing.
<b><u>Hazardous polymerization</u></b>	Will not occur.
<b><u>Conditions to avoid</u></b>	Excessive heat, sources of ignition, open flame.
<b><u>Incompatible Materials</u></b>	Strong oxidizing agents.
<b><u>Hazardous decomposition products</u></b>	None known under normal conditions of use.

## 11. TOXICOLOGICAL INFORMATION

### Potential short-term adverse effects from overexposures

<b>Inhalation</b>	Inhalation of dust may cause irritation of the respiratory system.
<b>Eye contact</b>	Dust may cause mechanical irritation of the eye.
<b>Skin contact</b>	No known hazard in contact with skin.
<b>Ingestion</b>	May cause irritation of the mouth, throat and gastrointestinal tract.

### Acute toxicological data

Name	Oral LD50	Dermal LD50	Inhalation LC50
Petroleum Coke 64741-79-3	-	-	-
Sulfur Compounds Mixture	-	-	>5 mg/l (Rat) 4 h
Polycyclic Aromatic Hydrocarbons Mixture	-	-	-

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

Petroleum coke was found not to be carcinogenic in monkeys and rats in a two-year inhalation study at concentrations up to 30 mg/m<sup>3</sup>. Chronic inflammatory changes similar to those produced by non-specific respiratory irritants were observed in some rats at the highest exposure level. Chronic skin painting studies of coke dust in mice did not produce evidence of carcinogenicity. Petroleum coke (delayed process and fluid process) was found not to be mutagenic in a rat in vivo bone marrow cytogenetic test, a mouse lymphoma assay and an Ames mutagenicity assay.

**Adverse effects related to the physical, chemical and toxicological characteristics**

<b>Signs and Symptoms</b>	Dust may be a mechanical irritant.
<b>Sensitization</b>	Not expected to be a skin or respiratory sensitizer.
<b>Mutagenic effects</b>	None known.
<b>Carcinogenicity</b>	None known.

Cancer designations are listed in the table below

Name	ACGIH (Class)	IARC (Class)	NTP	OSHA
Petroleum Coke 64741-79-3	Not Listed	Not Listed	Not Listed	Not Listed
Sulfur Compounds Mixture	Not Listed	Not Listed	Not Listed	Not Listed
Polycyclic Aromatic Hydrocarbons Mixture	Suspected human carcinogen(A2)	Carcinogenic to humans (1)	Reasonably anticipated to be a human carcinogen	Not Listed

<b>Reproductive toxicity</b>	None known.
<b>Specific Target Organ Toxicity (STOT) - single exposure</b>	Not classified.
<b>Specific Target Organ Toxicity (STOT) - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not classified.

**12. ECOLOGICAL INFORMATION****Ecotoxicity** This product is not expected to be harmful to aquatic organisms.

Name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Petroleum Coke 64741-79-3	72-hr EL50 >1000 mg/l Algae	96-hr LL50 >1000 mg/l Fathead minnow	-	48-hr EL50 >1000 mg/l Daphnia magna
Sulfur Compounds Mixture	-	-	-	-
Polycyclic Aromatic Hydrocarbons Mixture	-	-	-	-

<b><u>Persistence and degradability</u></b>	No information available.
<b><u>Bioaccumulation</u></b>	No information available.
<b><u>Mobility in soil</u></b>	No information available.
<b><u>Other adverse effects</u></b>	No information available.

**13. DISPOSAL CONSIDERATIONS****Description of Waste Residues**

No information available.

**Safe Handling of Wastes**

Handle in accordance with applicable local, state, and federal regulations.

**Disposal of Wastes / Methods of Disposal**

The user is responsible for determining if any discarded material is a hazardous waste (40 CFR 262.11). Dispose of in accordance with federal, state and local regulations.

**Methods of Contaminated Packaging Disposal**

Empty containers should be completely drained and then discarded or recycled, if possible. Dispose of in accordance with federal, state and local regulations.

## 14. TRANSPORT INFORMATION

**DOT (49 CFR 172.101):**

**UN Proper Shipping Name:** Not Regulated  
**UN/Identification No:** Not applicable  
**Class:** Not applicable.  
**Packing Group:** Not applicable.

**TDG (Canada):**

**UN Proper Shipping Name:** Not Regulated  
**UN/Identification No:** Not applicable.  
**Transport Hazard Class(es):** Not applicable.  
**Packing Group:** Not applicable.

## 15. REGULATORY INFORMATION

**US Federal Regulatory Information:**

US TSCA Chemical Inventory Section 8(b): This product and/or its components are listed on the TSCA Chemical Inventory.

**EPA Superfund Amendment & Reauthorization Act (SARA):**

**SARA Section 302:** This product does not contain any component(s) included on EPA's Extremely Hazardous Substance (EHS) List.

Name	CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs
Petroleum Coke	NA
Sulfur Compounds	NA
Polycyclic Aromatic Hydrocarbons	NA

**SARA Section 304:** This product may contain component(s) identified either as an EHS or a CERCLA Hazardous substance which in case of a spill or release may be subject to SARA reporting requirements:

Name	Hazardous Substances RQs
Petroleum Coke	NA
Sulfur Compounds	NA
Polycyclic Aromatic Hydrocarbons	1 lb final RQ 0.454 kg final RQ

**SARA Section 311/312:** The following EPA hazard categories apply to this product:

Fire Hazard

**SARA Section 313:** This product may contain component(s), which if in exceedance of the de minimus threshold, may be subject to the reporting requirements of SARA Title III Section 313 Toxic Release Reporting (Form R).

Name	CERCLA/SARA 313 Emission reporting:
Petroleum Coke	None
Sulfur Compounds	None
Polycyclic Aromatic Hydrocarbons	0.1 % Supplier notification limit

**State and Community Right-To-Know Regulations:**

The following component(s) of this material are identified on the regulatory lists below:

#### Petroleum Coke

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	Not Listed
Pennsylvania Right-To-Know:	Not Listed
Massachusetts Right-To Know:	Not Listed
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Not Listed
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants:	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

#### Sulfur Compounds

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	Not Listed
Pennsylvania Right-To-Know:	Not Listed
Massachusetts Right-To Know:	Not Listed
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Not Listed
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants:	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

#### Polycyclic Aromatic Hydrocarbons

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Carcinogen
New Jersey Right-To-Know:	SN 3758
Pennsylvania Right-To-Know:	Environmental hazard; Special hazardous substance
Massachusetts Right-To Know:	Carcinogen; Extraordinarily hazardous
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Present
Michigan Critical Materials Register List:	10 lb Annual usage threshold
Massachusetts Extraordinarily Hazardous Substances:	Carcinogen; extraordinarily hazardous
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Present
New Jersey - Special Hazardous Substances:	Carcinogen; mutagen; teratogen
New Jersey - Environmental Hazardous Substances List:	SN 3758 TPQ: 500 lb (If you have >500 lbs in combination of any of the listed chemicals, you are to report them under the category heading - N590 (that is, do not report the individual chemicals or their CAS numbers))
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	1 lb RQ (air); 1 lb RQ (land/water)



**Canada DSL/NDSL Inventory:** This product and/or its components are listed either on the Domestic Substances List (DSL) or are exempt.

**Canadian Regulatory Information:** This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by those regulations.

Name	Canada - WHMIS: Classifications of Substances:	Canada - WHMIS: Ingredient Disclosure:
Petroleum Coke	UP	
Sulfur Compounds	Uncontrolled product according to WHMIS classification criteria	-
Polycyclic Aromatic Hydrocarbons	D2A,D2B	0.1%

**Note:** Not applicable.

## 16. OTHER INFORMATION

**Prepared By** Toxicology and Product Safety

### Revision Notes

**Revision Date** 10/07/2015

**Revised Sections** The following sections (§) have been updated:  
 2. HAZARD IDENTIFICATION  
 5. FIRE-FIGHTING MEASURES  
 6. ACCIDENTAL RELEASE MEASURES  
 8. EXPOSURE CONTROLS/PERSONAL PROTECTION  
 9. PHYSICAL AND CHEMICAL PROPERTIES

### Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is intended as guidance for safe handling, use, processing, storage, transportation, accidental release, clean-up and disposal and is not considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.